

GERSHANOVICH, M.L.; KAUFMAN, B.D.; MYULLER, N.R.

Conference on problems of drug therapy in an oncological clinic.
Vop. onk. 11 no.12:98-101 '65. (MIRA 19:1)

DODIN, M.G.; GERSHANOVICH, N.L.

A new method of treatment of genuine ozena. Vest. otorinolar. No.3:
72-74 May-June 50. (CLML 19:4)

1. Of the Central Scientific-Research Institute of Otolaryngology of
the Ministry of Public Health RSFSR (Director -- Honored Worker in
Science Prof. V.K.Trutnev).

GROMOV, P.N.; GERSHANOVICH, N.L.; SMIRNOVA, A.M.; SHCHERBLOVA, R.G.

Vasilii Ipat'evich Onokhrienko. Vest.otorinolar. 12 no.2:81 Mr-4p
'50. (CJML 19:2)

1. Obituary.

GERSHANOVICH, N.L.; GROMOV, P.N.

Effect of prolonged use of hearing aids on hearing. Vest. otorinolar.,
Moskva 14 no. 3:93 May-June 1952. (CJNL 22:4)

1. Of the Polyclinic for Hearing and Speech of the Administration of
Cost Accounting Therapeutic Institutions of Moscow Municipal Public
Health Department.

GERSHANOVICH, N.I., docent

Ozena of the trachea and larynx. Vest. oto-rin. 16 no.6:74 M-D '54.
(MLRA 8:1)

1. Iz Nauchno-issledovatel'skogo instituta bolezney ukh, gorla i
nosa Ministerstva zdravookhraneniya RSFSR (dir.-zasluzhennyy
deyatel' nauki prof. V.K.Trutnev)

(RHINITIS, ATROPHIC

larynx & trachea)

(LARYNX, diseases

atrophic rhinitis, pathol.)

(TRACHEA, diseases

atrophic rhinitis, pathol.)

NEVOROZHKIN, I.P., doktor meditsinskikh nauk; GERSHANOVICH, N.L., dotsent

Roentgenotherapy of chronic inflammatory processes of the accessory sinuses of the nose. Vest.oto-rin. 17 no.2:38-40 Mr-Apr '55.

(MLRA 8:7)

1. Iz kafedry rentgenologii (zav. prof. Yu.N.Sokolov) Tsentral'nogo instituta usovershenstvovaniya vrachev i kliniki bolezney ucha, nosa i gorla imeni Semashko Mostorzdavotdela (nauchnyy konsul'tant prof. T.I.Gordyshevskiy).

(SINUSITIS,

paranasal, ther., x-ray)

(RADIOTHERAPY, in various diseases,
sinusitis, paranasal)

GERSHANOVICH, N. L., Doc Med Sci -- (diss) "Author's ^{ref. of diss. by} ~~paper~~ on
the theme, 'Data on ^{the} ~~etiology~~, pathogenesis, histopathology, and
clinical ~~observations~~ of chronic inflammations of the maxillary
sinus'." Mos, 1958. 28 pp. (State Sci Research Inst of Ear,
Throat, and Nose of Min ^{of} ~~at~~ Health RSFSR), 100 copies. (KL,9-58,
122)

- 123 -

GERCHIKOV, N. I.

Methods of detecting flies and their counting in the dwelling
of people. Dokl. Irk. gos. univ.-lens. ped'gichesk. inst. no. 84
196-1-1 '63 (MIRA 1801)

ETINGOF, R.N.; GERSHANOVICH, V.N.

Inverse Pasteur effect in ascitic cancerous cells of mice. Biokhimiia 18
no.6:668-674 N-D '53. (MLBA 6:12)

1. Kafedra biokhimii i-go Moskovskogo meditsinskogo instituta.
(Fermentation) (Pathology, Cellular)

Gershanovich, V.N.

V-4

USSR/Human and Animal Physiology - Blood.

Abs Jour : Ref Zhur - No 1, 1958, 3897

Author : V.N. Gershanovich

Inst : Stalinabad Medical Institute.

Title : Vitamin B₁₂ Metabolism in Subtropical Anemias.

Orig Pub : Tr. Stalinab. med. in-ta, 1955, 16, 63-75

Abstract : In patients with blood and liver diseases, the levels of vitamin B₁₂ in blood and urine were microbiologically determined; some of the patients received a load of 15 μ of the vitamin. In a control group, not including blood and liver patients, the 24-hour urine contained 20-60 m μ of vitamin B₁₂, at a 140-340 μ /ml of Vitamin B₁₂ level in the serum (S) and a daily fluctuation of this level of 20-60 μ /ml. Loading with B₁₂ produced an increase of the amount of the vitamin in the S after

Card 1/2

GERSHANOVICH, V. N. Cand Med Sci -- (diss) "The Metabolism of
Vitamin B₁₂ ^{during} ~~at~~ Subtropical Anemias." Stalinabad, 1957. 13 pp 21 cm.
(Stalinabad Medical Inst im Abuali Ibn-Sino (Avicenna)), 100 copies
(KL, 17-57, 99)

- 64 -

GERHNOVICH, V.N., AGOL, V.I., ETINGOF, R.N., DZAGUROV, S.G.

Characteristics of metabolism in kidney tissue cultures of monkeys.
[with summary in English]. Biokhimiia 23 no.3:453-460 My-Je '58
(MIRA 11:8)

1. Laboratoriya biokhimii Instituta po izucheniyu poliomielit AMN
SSSR, Moskva.

(KIDNEYS, metabolism,
in tissue culture (Rus))

AGOL, V.I.; GERSHANOVICH, V.N.; ETINGOF, R.N.

Comparative characteristics of metabolism in cultures of normal
and tumorous cells [with summary in English], Biokhimiia 24 no.1:
101-109 Ja-F '59. (MIRA 12:4)

1. Biochemical Laboratory of the Poliomyelitis Research Institute,
Academy of Medical Sciences of the U.S.S.R., Moscow.

(TISSUE CULTURE,

comparative metab. aspects of normal & tumor tissue
cultures (Rus))

(NEOPLASMS, metab.
same)

S/218/62/027,001/001/001

1016-1216

Authors: Gershanovich, V. N., Palkina, N. A., and Katts, G. I

Title OXIDATIVE METABOLISM OF STAPHYLOCOCCUS AUREUS AND OF ITS MUTANT
OBTAINED BY UV-IRRADIATION

Periodical: Biokhimiya, v. 27, no. 1, 1962, 109-119

Text. The *S. aureus* mutant (St-VV-3) shows sensitivity to carcinostatic substances. It was therefore of interest to compare the pathways of oxidative metabolism in the mutant and the parent strain (St-209) and to see whether the mutant could be considered as a model of a cancerous cell. The parent strain St-209 showed a high O_2 uptake in the presence of glucose, also oxidizing pyruvate, lactate, acetaldehyde, formaldehyde, ethanol, formic acid, OAA and malate. Under anaerobic conditions St-209 actively decarboxylated pyruvate and OAA. Monoiodoacetate (0.2 mM) completely inhibited the utilization of glucose and accumulation of lactate by St-209. In contrast to the parent strain, St-UV-3 showed no increase in oxygen uptake in the presence of glucose, but unlike the former, was able to oxidize a number of TCA cycle intermediates. Under anaerobic conditions St-UV-3 exhibited only slight pyruvic and OAA decarboxylation. The Q_{CO_2}/Q_{O_2} ratio for pyruvate was higher than 2 in strain St-209, while in St-UV-3 it was close to 1. The effect of arsenite,

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Card 1/2

OXIDATIVE METABOLISM...

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1016/1216

malonate, cyanide and orthophosphate on the oxidation of different substrates by the two strains was compared. The results are discussed in terms of the possible defect imparted to the respiratory system of St-UV-3 as a result of mutation. The properties of the respiratory system of the mutant are compared with those of tumor cells

Association: Gosudarstvennyy kontrol'nyy institut meditsinskikh biologicheskikh preparatov im. L. A. Tarasevicha (State Institute for Control of Medicinal Biological Preparations im. L. A. Tarasevich), Moscow

Submitted June 27, 1961

Card 2/2

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2000 10 10

1. The first part of the document is a letter from the
Director of the Central Intelligence Agency to the
Director of the National Security Agency. The letter
is dated 10/10/00 and is signed by the Director of the
Central Intelligence Agency.

GERSHANOVICH, V.N.

Some problems concerning the regulation of enzymatic activity
and synthesis in bacteria. Vest. AMN SSSR 18 no.12:74-84 '63.

(MIKA 17:7)

1. Institut epidemiologii i mikrobiologii imeni Gamalei AMN SSSR.

GERSHANOVICH, V.N.; AVDEYeva, A.V.; GOLDFARB, D.M.

Release of the enzymes of the glucose transformation system from the spheroplasts of Escherichia coli B obtained under the influence of the "ghosts" of the even series of T phase.
Biokhimiia 28 no.4:700-708 J1-Ag '63. (MIRA 18:3)

1. Institut epidemiologii i mikrobiologii imeni Gamalei AMN SSSR, Moskva.

GERCHALOVICH, V.I.; KUPP, G.I.

Synthesis of 6-nitrophenyl- β -D-glucopyranoside. *Vop. med. khim.* 10
no. 3:212-213. Mar-Apr 1964. (VIRA 18:1)

1. Institut khimicheskoi tekhnologii imeni N.F. Gumanova AMN SSSR,
Moskva.

1. Institute portfolio, 11 volumes - 1955-1959.

2. Institute portfolio, 11 volumes - 1960-1964.

1955-1959.

1960-1964.

3. Institute portfolio, 11 volumes - 1965-1969.

GERSHANOVICH, V.N.; PALKINA, N.A.; BURD, G.I.

Regulation of the synthesis of oxidative enzymes in *Staphylococcus aureus* by the end products of glycolysis. *Biokhimiia* 29 no.1: 97-109 Ja-F '64. (MIRA 18:12)

1. Institut epidemiologii i mikrobiologii imeni Gamalei AMN SSSR i Institut morfologii cheloveka AMN SSSR, Moskva.
Submitted May 9, 1963.

GOLITSAR, D.M.; ZUYEV, V.A.; GERSHANOVICH, V.S.

Phage reproduction in spheroplasts of Escherichia coli produced
with the help of lytic enzyme of the phage T2. Mikrobiologiya 34
no.4:648-652 J1-Ag '65, (MIRA 18:10)

1. Institut epidemiologii i mikrobiologii imeni N.F.Gamalei
AMN SSSR.

BONDARENKO, V.M.; ZVEREV, M.I.; KLIMENKO, A.; BEREZHINA, T.I.;
GERSHANOVICH, Yu.G.

Fiber formation from polypropylene. Khim. volok. no.6:10-13 '65.
(MIRA 18:12)

1. Vsesoyuznyy nauchno-issledovatel'skiy institut iskusstvennogo
volokna (for Bondarenko, Zverev, Klimenkov). 2. Kurskiy kombinat
(for Berezkina, Gershanovich).

L 27707-66 ENT(1) SCTB DD

ACC NR: AP6017295

SOURCE CODE: LR/0301/66/012/003/0262/0265 32

AUTHOR: Gershenovich, Z. S.; Gershenovich, A. Z.; Odnokrylaya, L. A.; Emirbekov, E. Z.
Veksler, Ya. I.

ORG: Department of Biochemistry, State University, Rostov-na-Donu (Kafedra biokhimi gosudarstvennogo universiteta); Central Scientific Research Laboratory, Medical Institute, Rostov-na-Donu (Tsentral'naya nauchno-issledovatel'skaya laboratoriya meditsinskogo instituta); Experimental Laboratory SKVO, Rostov-na-Donu (Eksperimental'naya laboratoriya SKVO)

TITLE: Effect of impact acceleration on nitrogen metabolism in the rat brain

SOURCE: Voprosy meditsinskoj khimii, v. 12, no. 3, 1966, 262-265

TOPIC TAGS: impact acceleration, animal physiology, acceleration, nitrogen metabolism

ABSTRACT: Ninety white laboratory rats (weight 130—160 g) were used to determine the effect of impact acceleration on the metabolic processes of the brain. The concentrations of free ammonia, glutamine, glutamate, asparaginate, and γ -aminobutyric acid, as well as of labile and stable bound amide group proteins were investigated. The rats were subjected to impact accelerations (250—300 m/sec²) in a chamber. These accelerations were arbitrarily designated as: weak (4—10 G), medium (11—24 G), and strong (>24 G). Three of the ten rats subjected to strong impact acceleration died. The rats were immersed in liquid air 15—20 min after exposure and the frozen brain, excluding the cerebellum, was removed. The meninges were removed, the brain was pulverized in liquid air, and was transferred in a powdery form for precipitation of

Card 1/2

UDC: 612.82.015.347.014.47:531.113

L 27707-66

ACC NR: AP6017295

Table 1. Metabolism levels at various impact accelerations

	Control	4--10 g		11--24 g		>24 g
		15--20 min	3 hrs.	15--20 min	3 hrs.	15--20 min
Ammonia	0.86	1.68	0.84	1.97	2.02	3.19
Glutamine	7.39	6.51	7.18	5.57	5.40	4.1
Glutamic Acid	127.	128.	123.	137.	118.	114.
Aspartic Acid	36.4	39.6	40.8	41.5	32.3	31.3
Aminochryc Acid	23.8	23.6	25.1	28.4	18.7	55.6
Labileamido Group	125.	127.	121.2	80.4	77.2	61.3
Stable-bound Amido Group	286.	280.	278.2	282.2	267.4	393.

protein using chilled 5% trichloroacetic acid. The concentrations of the above-mentioned fractions were determined in the supernatant liquid. Increased impact acceleration caused the results shown in Table 1. Orig. art. has: 3 tables. [LS]

SUB CODE: 06 / SUBM DATE: 10Sep64/ ORIG REF: 002/ OTH REF: 004/ ATD PRESS:

5002

Card 2/2 BLG

ACC NR: AP6025929

SOURCE CODE: UR/0301/66/012/004/0418/0424

34
B

AUTHOR: Bronovitskaya, Z. G.; Gershenovich, Z. S.; Koloushek, Ya.; Zikh, B.

ORG: Chair of Biochemistry, State University, Rostov-na-Donu (Kafedra biokhimii Gosudarstvennogo universiteta); Institute of Biophysics, Medical School, Karlov University, Prague (Institut biofiziki pri meditsinskom fakul'tete Karlova universiteta)

TITLE: Oxidative phosphorylation of the brain and liver during the action of L-methionine-sulfoximin and increased oxygen pressure

SOURCE: Voprosy meditsinskoj khimii, v. 12, no. 4, 1966, 418-424

TOPIC TAGS: brain metabolism, liver metabolism, combined stress, hyperoxia, phosphorus metabolism, oxidative phosphorylation, LIVER, RAT, BIOLOGIC RESPIRATION, BRAIN, BIOLOGIC METABOLISM, PHOSPHATE, OXYGEN

ABSTRACT: L-methionine-sulfoximin (MSI) alters the content of adenylic components in the liver of rats. Six hr after MSI injection, the ADP and ATP content increases (30%), oxidative phosphorylation increases, and respiration is unaltered. Twelve hr after MSI injection there is an increase in the total content of adenylic system components. MSI does not alter the intensity of brain metabolism but depresses esterification of inorganic phosphates (34%). Exposure to oxygen under pressure (4 atm) for an hour increases both respiratory intensity and brain phosphorylation. MSI and increased oxygen pressure together caused an activation of brain phosphoryla-

Card 1/2

UDC: 616.831+616.361-008.921.8-02:1615.777.818+612.274

L 40157-66

ACC NR: AP6025929

tion compared to the action of MSI alone. The sensitivity of animals injected with MSI to increased oxygen pressure is elevated compared to controls. Apparently, one reason for this is altered phosphorus metabolism. It was concluded that despite the ability of increased oxygen pressure and MSI to precipitate convulsive attacks, their mechanism of action on the phosphorus metabolism of individual tissues differs. Orig. art. has: 4 tables. [CD]

SUB CODE: 06/ SUBM DATE: 10Feb65/ ORIG REF: 010/ OTH REF: 005/ ATD PRESS:

5049

Card

212/116P

PA 59/49100

GERSHANOVICH-PALEYES, L. YA.

user/Medicine - Penicillin Jun 49
Medicine - Endocarditis

"Morphology of Subacute Septic Endocarditis,
treated by penicillin," L. Ya. Gershanovich-
Paleyev, Path Anat Inst Imeni Acad A. I.
Abrikosov, Clinical Ord of Lenin Hosp Imeni
S. P. Botkin, Moscow, 10 pp

"Klin Med" Vol XXIII, No 6, pp. 35-40

Presents seven case histories showing that
treatment by penicillin results in destruction
of microbes present in thrombotic swelling of
afflicted valves with subsequent resolution
of swelling. Indirect complications appearing
59/49100

user/Medicine - penicillin (cont.) Jun 49

during treatment are an ulcerous process in the
valves apparent after swelling is resolved and
developing into perforations, and an increase in
valvular deficiency, and may lead to death in
deficiency which is the chief cause of death in
subacute endocarditis cases. Early treatment by
penicillin may prevent valvular perforation.

59/49100

GERSHMANOVICH-PALEYE, L. Ya.

"Pathological Anatomy of Subacute Bacterial Endocarditis Treated With Penicillin." Sub 30 Jan 51, Central Inst for Advanced Training of Physicians.

Dissertations presented for science and engineering degrees in Moscow during 1951.

SO: Sum. No. 480, 9 May 55.

GERSHANOVSKIY, O. and POLIKARPOV, M.

"USSR Planning of Industrial Gross and Commodity Production," Planovoye
Khozyaystvo, No.3, 1955

Translation W-31722, 27 Mar 56

FOLIKARFOV, Mikhail Sergeyevich; GERSHANGOVSKIY, Ovshey Moiseyevich;
ZHOLKEVICH, Anton Yevgen'yevich; STREL'NIKOVA, M.A., red.;
FONOMAREVA, A.A., tekhn. red.

[Planning of industrial production in terms of costs] Planirovanie proizvodstva produktsii promyshlennosti v stoimostnom vyrazhenii. Moskva, Izd-vo ekon. lit-ry, 1961. 110 p.
(MIRA 15:2)

(Industrial management)

KOLESNIKOV, M.S.; GERSHBAUM, P.S.; MIRONOVA, T.M.

Limit of differentiated inhibition in rabbits of different ages.
Trudy Inst.fiziol.AN BSSR 3:49-54 '59. (MIRA 13:7)

1. Laboratoriya vysshey nervnoy deyatel'nosti Instituta fiziologii AN BSSR.

(INHIBITION)

GERSHBERG, A.

Student's exhibition in a plant. Sov.foto 22 no.6:30 Je
'62. (MIRA 15:6)

(Photography—Exhibitions)

GERSHBERG, A. (Astrakhan')

On a newspaper assignment; amateur photographers in newspapers.
Sov.foto 22 no.11:33 N '62. (MIRA 16:1)

1. Spetsial'nyy korrespondent zhurnala "Sovetskoye foto".
(Astrakhan--News photographers)

GERSHBERG, A.

"Cuban revolution in photographs." Sov.foto. 23 no.2:5 F '63.
(MIRA 16:4)

(Photography--Exhibitions) (Cuba)

GERSHBAL, A. (Kazan?)

The needs of Kazan amateur photographers. Sov.foto 23 no.3:26 Apr '63.
(MIRA 16'A)

1. Spetsial'nyy korrespondent zhurnala "Sovetskoye foto".
(Kazan--Photography)

GERSHBERG, A. L.

"Functional Study of the Liver in Hepatic and Mechanical Jaundices," Klin. Med.,
26, No. 1, 1948, Maj. Med Service, Nth Mil. Hospital.

GERSHBERG, A. I., kand. med. nauk (Krybyshev)

Treatment of some complications in myocardial infarction. Klin.
med. no.11:141 '61. (MIRA 14:12)

(HEART--INFARCTION)

GERSHEBO, A.Ye.

~~Initial-current technique in measuring cathode temperatures in~~

triodes. Zhur. tekhn. fiz. 25 no.10:1703-1713 S '55.(MLRA 9:1)
(Triodes)

GERSHBERG, A. Ye.: Master Tech Sci (diss) -- "The technological control of the current at the negative electrode in the production of electro-vacuum instruments". Leningrad, 1958. 10 pp (Min Higher Educ USSR, Leningrad Polytech Inst im M. I. Kalinin), 150 copies (KL, No 5, 1959, 149)

S/181/61/003/005/012/042
B101/B214

9.4300(1138, 1147, 1137)

AUTHOR: Gershberg, A. Ye.

TITLE: The role of space redistribution of charges in the kinetics of the inner photoeffect of highly resistant semiconductors

PERIODICAL: Fizika tverdogo tela, v. 3, no. 5, 1961, 1384 - 1392

TEXT: The following problem is treated in this paper. In inhomogeneous photoconductors or on inhomogeneous exposure of the photoconductor the transition to a new state of equilibrium is accompanied by a redistribution (RD) of the density of the charged carriers. This RD is of importance for the construction of television tubes and for the study of the kinetics of high resistance photoconductors. From these considerations the sluggishness of the photocurrent was measured on exposure of layers of Sb_2S_3 , Sb_2Se_3 , amorphous Se, Sb_2S_3 , AsSbSe_3 , PbO and some mixtures of these. The sensitivity to light of these highly resistant substances ($\rho = 10^{11} - 10^{14}$ ohm.cm) was so great that the resistance decreased to one hundredth of the dark resistance on exposure to 400 lux. The exposure

Card 1/6

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S/181/61/003/005/012/042

B101/B214

The role of space redistribution...

was made through KC-10 (KS-10) red filter or Φ C-1 (FS-1) violet filter. The sluggishness was measured along and perpendicularly to the layer. The exposure was made in the interval of $2 \cdot 10^{-2}$ sec periodically by means of a toothed disk or once (1 sec) by means of a shutter. The following quantities were measured: the time constant τ_{eff} determined as the ratio between the maximum and the minimum photocurrent in periodic impulses and the "front constant" τ_f . The experimental data showed strong scattering.

1) Sluggishness independent of the applied potential. Fig. 4 shows the results of measurements for Sb_2S_3 , Sb_2Se_3 . The sluggishness along and perpendicular to the layer had about the same value whether exposed to red violet or white light. Similar results were obtained with other substances also. From this it is concluded that in spite of greatly varied experimental conditions with regard to RD no great difference in the kinetics of the inner photoeffect appeared. Therefore, the RD has only a small effect on the kinetics of the change of conductivity. 2) Sluggishness dependent on the potential applied to the sample. This case appears a) in samples whose ratio of resistivities for different signs of the potential is particularly large (about 40 for $U = \pm 1$ v); b) when the

Card 2/6

The role of space redistribution...

S/181/61/003/005/012/042
B101/B214

exposure is made from the side of the aluminum electrode. Fig. 6 shows the results of measurements for a Sb_2S_3 . Sb_2Se_3 layer. It is concluded that the dependence of the sluggishness on the potential is due to the contact effect on the Al electrode. Also the observed jump in the sluggishness when the potential passes through zero (Fig. 9) shows that the change in the kinetics is caused by contact effects. V. I. Il'ichev and G. N. Travleyev, students of LGU (Leningrad State University), assisted in the work. Ya. A. Oksman and M. V. Yepifanov are mentioned. There are 9 figures and 12 references: 6 Soviet-bloc and 6 non-Soviet-bloc. The 4 references to English-language publications read as follows: R. V. Smith, Rose, Phys. Rev., 97, 1531, 1955; A. Rose, *ibid.* 97, 1538, 1955; J. R. Haynes, J. A. Hornbeck, *ibid.* 97, no. 2, 311, 1955; G. J. Shulman, *ibid.*, 102, no. 6, 1451.

SUBMITTED: May 31, 1960 (initially)
January 5, 1961 (after revision)

Card 3/6

GERSHBERG, Anatoliy Yevgen'yevich; LAPUK, A.G., red.

[Television camera tubes using the photoconductive effect (vidicons)] Peredaiushchie televizionnye trubki, ispol'zuyushchie vnutrennii fotoeffekt (vidikory). Moskva, Energiia, 1964. 239 p. (MIRA 17:11)

GERSHBERG, I.

Our corrections. Fin. SSSR 37 no.6:83-84, Je '63. (MIRA 16:9)

1. Obshchestvennyy inspektor Kishinevskogo gorodskogo finansovogo
otdela.

(Kishinev--Finance)

BLYASHOV, V.; GERSHBERG, I.

Is this expedient? Fin. SSSR 37 no.11:52 N'63. (MIRA 17:2)

1. Nachal'nik otdela gosudarstvennykh dokhodov Kishinevskogo gorodskogo finansovogo otdela (for Blyashov). 2. Obshchestvennyy inspektor Kishinevskogo gorodskogo finansovogo otdela (for Gershberg).

Chernik, Izrail' Mikhailovich.

Core intel for the country. Moskva Gospolitizdat, 1941. 62 p. (52-47258)

TR05.04

to Shpil'skiy, M.A., inzh.; SHPILEVSKIY, M.A., inzh., assistant

Using capron in repairing ball bearings. Mekh. stroi. 18
no. 1:24-25 Jan '51. (ILL 14:2)

1. Srednenezlatskiy politekhnicheskiy institut (for Shipilevskiy).
(Bearings (machinery)--Maintenance and repair)
(Nylon)

GERSHBERG, M.L.

Production of vegetable caviar in vacuum apparatus. Kons. 1 ov. prom.
12 no.3:4-5 Mr '57. (MLRA 10:5)

1. Stalingradskiy konservnyy zavod.
(Cooker (Vegetables)) (Vacuum apparatus)

Aluminate-silicate cement. O. A. Gerslberg and E. F. Galunovich. *Strontal Prom.* 17, No. 7, 69-73 (1939).

Aluminate silicate cement deteriorates on storage. Small additions of portland cement or lime considerably accelerate its setting and decrease its strength. The accelerating effect of CaCl_2 is less. In moist conditions the strength of the concrete is 25% less than that of air-hardened concrete.

R. E. S.

ASD 364 METALLURGICAL LITERATURE CLASSIFICATION

GERCHBERG, C. A.

Factories of reinforced concrete products Moskva, Gos. izd-vo stroit. lit-ry, 1951
247 p. (52-21701)

TA444.G4

1. Reinforced concrete. 1. Soroker, V. I., jt. au.

USSR/Engineering - Hydraulics, Methods Nov 51

"Experiment on Deseration of Concrete in Hydraul-
lic Engineering Construction," O. A. Gershberg,
Cand Tech Sci, S. G. Skvortsov, A. M. Zvenigo-
rodskiy, Engineers

"Gidrotekh Stroi" No 11, pp 14-18

In 1950, for 1st time in Soviet Union, desera-
tion of concrete was realized on industrial
scale under supervision of TSNIPI (Cen Sci Res
Production Testing Lab) of "Stroitel" (Builder)
Trust. Discusses methods for deseration on sur-
face and in layers of concrete blocks and

200T86

USSR/Engineering - Hydraulics, Methods Nov 51
(Contd)

describes equipment. Describes testing for
frost resistance and presents comparative re-
sults.

200T86

GERSHBERG, O.A.

GERSHBERG, O.A.

PHASE I

TREASURE ISLAND BIBLIOGRAPHIC REPORT

AID 161 - I

Call No.: TA681.G36

BOOK

Author: GERSHBERG, O. A., Master of Eng. Sci., Laureate of the Stalin Prize

Full Title: VACUUM-CONCRETE WORKS IN MONOLITH CONSTRUCTIONS

Transliterated Title: Vakuumirovaniye betona v monolitnykh konstrukttsiyakh

Publishing Data

Originating Agency: All-Union Scientific Engineering-Technical Society of
Constructors ("VNIIT Stroyteley")

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Architecture

Date: 1952

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Eng. Sci.

Appraiser: None

Text Data

Coverage: The most effective modern method of treatment of concrete is described. This method consists in the removal of excess water and vapor by the creation of a vacuum above the concrete hardening in the forms. The method is widely used in the construction of dams and large foundations for improvement of the quality of concrete and extension of its durability, particularly under winter conditions. This method has been used in recent Soviet hydro-electric constructions.

1/2

GERSHBERG, O.A.

AID 161 - I

Vakuumirovaniye betona v monolitnykh konstruktsiyakh

The book contains some interesting information for winter concrete works.

Purpose: General information for the construction engineer and technical personnel.

Facilities: None

No. of Russian and Slavic References: 1 (1940)

Available: Library of Congress.

2/2

POPOV, A. A.; POPOV, A. A.

Concrete

Diagram illustrating the structure of the concrete. 1. The concrete is made of 100% concrete. 2. The concrete is made of 100% concrete. 3. The concrete is made of 100% concrete.

9. Monthly List of Russian Accessions, Library of Congress, September 1956, Uncl.

GERSHBERG, O.A., laureat Stalinskoy premii.

25 years' work of the Central Laboratory of the "Stroitel'" Trust.
Stroi.prom. 33 no.1:36-37 Ja'55. (MLRA 8:3)

1. Direktor Tsentral'noy laboratorii tresta "Stroitel'".
(Building research)

GERSHBERG, Osip Abramovich; MOSHCHANSKIY, N.A., nauchnyy red.; MARIYENGOV,
G.D., nauchnyy red.; GURVICH, E.A., red.; GILSON, P.G., tekhn.red.

[Technology of concrete and reinforced concrete elements] Tekhno-
logiya betonnykh i zhelezobetonnykh izdelii. Moskva, Gos.izd-vo
lit-ry po stroit. materialam, 1957. 317 p. (MIRA 11:2)
(Precast concrete)

GERSHBERG, O. A., Doc Tech Sci (diss) -- "The technology of concrete and reinforced-concrete parts". Moscow, 1959. 27 pp (Min Higher Educ USSR, Moscow Order of Labor Red Banner Construction Engineering Inst im V. V. Kuybyshev), 150 copies (KL, No 25, 1959, 131)

GERSHBERG, Osip Abramovich, for Doc of Technical Sci on the basis of
dissertation defended 29 ^{Jul} 59 in Council of the Moscow Order of Labor
Red Banner Construction Engineering Institute im. Kuybyshev, entitled:

"Technology of Concrete and Reinforced Concrete Products." (Textbook for
~~Construction Engineering~~ *Construction Engineering and Reinforcement*
~~Higher Institutions of Learning and Universities~~)

(BIVISSO USSR, 2-61, 30)

SHEYKIN, A.Ye., doktor tekhn.nauk, prof.: GERSHBERG, O.A., doktor tekhn.-
nauk, prof.

Concerning the results of the all-Union competition for the best
methods of selecting concrete composition. Bet. i zhel.-bet. no.9:
407-409 S '61. (MIRA 14:10)

(Concrete)

GERSHBERG, O.A., doktor tekhn. nauk, prof.

Book on the technology of prestressed concrete. Bet. 1 zhel.-
bet. no.11:526 N '61. (MIRA 16:8)

(Frestressed concrete)

GERSHBERG, O.A., doktor tekhn. nauk, prof.

"Acceleration of concrete hardening" by [doktor tekhn. nauk]
S.A. Mironov and [kand. tekhn. nauk] L.A. Malinina. Reviewed
by O.A. Gershberg. Bet. 1 zhel.-bet. 9 no.11:528, 3 of cover.
N '63. (MIRA 17:1)

GENSHBERG, Izak Abramovich, prof., doktor tekhn. nauk, laurent
Gosudarstvennoy premii; VILKINSKIY, A.I., prof., rensenent;
SIZOV, V.N., prof., doktor tekhn. nauk, rensenent; IVANOV,
P.M., kand. tekhn. nauk, nauchn. red.

[Technology of concrete and reinforced concrete products]
Tekhnologiya betonnykh i zhelezobetonnykh izdelii. Moskva,
Stroiizdat, 1969. 110 s. (MIRA 18.8)

1. Kukovatel' kafedry "Tekhnologiya vyazhushchikh veshchestv
i betonov" Moskovskogo inzhenerno-stroitel'nogo instituta im.
V.V.Kulbyshova (for Volzhenskiy). 2. Kukovatel' kafedry
"Stroitel'nyye materialy i izdeliya" Vsesoyuznogo nauchno-iss-
ledovatel'skogo instituta (for Sizov).

22087

S/325/61/003/003/014/048
A001/A101

3.1560

AUTHORS: Gershberg, R.Ye. and Pronik, V.I.

TITLE: The absolute spectrophotometry of the nebula NGC 7000 by means of light filters

PERIODICAL: Referativnyy zhurnal, Astronomiya i Geodeziya, no. 3, 1961, 29, abstract 3A282 ("Izv. Krymsk. astrofiz. observ.", 1960, v. 21, no. 228, Engl. summary)

TEXT: The authors describe the methods of photographic observations of diffuse emission nebulae and present the results of investigation of the nebula NGC 7000. They determined absolute intensities of nebula emission in the lines $\lambda 3727$, $N_1 + N_2$, $H\beta$ and $H\alpha + [N II]$, and in continuous emission near $\lambda 4000$. The stripping out of the mentioned regions was performed by means of glass light filters. The contours of pass bands are given. Observations were conducted with a camera $D = 640$ mm, $D/F = 1:1.4$. The calibration of the photographs was made by a standard photometer. Standardization was carried out by references to artificial stellar images obtained with an auxiliary camera installed on the device. The energy fluxes from the standard stars were determined from the energy distribution in

Card 1/3

27087

3/25/77 1/2/77 1/2/77
AD-11101

The absolute spectrophotometry ...

spectra of stars of different spectral classes with respect to the Sun. The accuracy of emission intensity determination in absolute magnitudes amounts to ~ 0.1 mag. The changes in emission line intensities and continuous spectrum of the nebula were obtained along the selected cross sections and in the bright filaments. It is shown that continuous emission of the nebula is mainly caused by the background of weak stars not resolved by the photoemulsion. Electronic temperature was determined from the ratios $[O II]/H\beta$ and $[O III]/H\beta$. It does not practically change at the transition from the zone of O III to the zone of O II; it also does not increase in bright filaments which are sharp edges of [O III]-emission. The enhanced brightness of continuous emission near the bright filaments can be explained by the mechanism of hydrogen emission. The star HD 193579 (O7) is the star exciting the northern part of the nebula. However, it is not able to ionize the whole set of nebulae in this field. It is presumed that one more exciting star or a group of stars exist between the "Pelican" and "America" in the field of the "Mexican Bay", hidden from observation by a dense dust cloud. It is noted that the exciting star must be located very near the curvature center of a large arc-shaped filament at the nebula eastern edge. From the absence of stars of spectral classes O or B0 up to 12^m in this field, the authors estimate the density and mass of the absorbing cloud. The lower limit of absorption in the cloud is 6^m , and its mass amounts to

Card 2/3

22087

S/R 4/01/0004 01/014/A-2
A001/A101

The absolute spectrophotometry ...

~1,000 θ . It is surmised that the dark cloud is genetically related to the nebula. It is necessary to know distances to the nebula and to the cloud. The photographs of the "America" nebula in various regions of spectrum are presented, as well as photometric cross sections in various rays, and the photograph of the set of nebulae in the field investigated. There are 10 references.

V. Iosipov

[Abstracter's note: Complete translation]

Card 3/3

23698

S/035/61/000/004/028/058
AC01/A101

3,1510

AUTHORS: Gershberg, R.Ye., Pronik, V.I., Shcheglov, P.V.

TITLE: Photographing diffuse nebulae in infrared rays

PERIODICAL: Referativnyy zhurnal. Astronomiya : Geodeziya, no. 4, 1961, 30, abstract 4A321 ("Izv. Krymsk. astrofiz. observ.", 1960, v. 22, 150-151, Engl. summary)

TEXT: The authors report on the results of photographing bright gaseous nebulae NGC 6611, 6618 and 6623 in infrared region by means of an electronic-optical converter mounted on a high-speed camera with $D=640$ mm, $D/F=1:1.4$. It was supposed to detect emission in region $\lambda\lambda 9060-9540$. The region was singled out by a filter absorbing light with $\lambda < 8000$ and by the long wavelength sensitivity border of the equipment. A 3C -7 (ZS-7) additional filter permitted the solution of the problem about the nature of emission, i.e. emission [S III] or continuum, because by narrowing the pass band by 2.5 times the filter did not practically change transmission of emission at $\lambda 9540$. No emission from the nebula NGC 6611 was

Card 1/2

23698

Photographing diffuse nebulae in infrared rays

S/035/61/000/004/028/058
A001/A101

detected, and in the nebula NGC 6523 only the brightest part of the nucleus was noticed. Apparently the pass band used for taking the photographs was too wide. The nebula NGC 6618 is well visible in infrared rays. There are 8 references.

V. Yesipov

[Abstracter's note: Complete translation]

Card 2/2

GERSHBERG, R.Ye.; PRONIK, V.I.; KORKIN, S.I.

Oscillographic attachment to the MF-4 microphotometer for recording
intensities. Izv.Krym.astrofiz.obser. 22:166-175 '60.

(MIRA 13:7)

(Microphotometer--Attachments) (Oscillograph)

S/035/61/000/002/003/016
A001/A001

Translation from: Referativnyy zhurnal, Astronomiya i Geodeziya, 1961, No. 2,
p. 20, # 2A221

AUTHOR: Gershberg, R.Ye.

TITLE: On the Fine Filamentous Structure and Polarization of Reflection
Nebulae

PERIODICAL: "Izv.Krymsk.astrofiz.observ.", 1960, Vol.23, pp.21-30 (Engl.summary)

TEXT: The author describes characteristics of fine filamentous reflection
nebulae in Pleiades. He discusses the nature of non-radial (relative to the light-
ing stars) light polarization of these objects. Physical mechanisms are considered
which could explain the formation of such extended structures in clouds of H I. Ap-
parently these filaments can not be formed in the development course of an indivi-
dual cloud, and the picture observed may prove to be a result of lighting by bright
stars of the fine filamentous structure inherent to extensive regions of H I. There
are 24 references.

Author's summary

Translator's note: This is the full translation of the original Russian abstract.

Card 1/1

GERSHBERG, R.Ye.; METIK, L.P.

Densities and masses of diffuse nebulae.
24:148-159 '60.

(Nebulae)

Izv.Kryn.astrofiz.obser.
(MIRA 13:12)

GERSHBERG, R.Ye.; PRONIK, V.I.

Reality of the peculiar nebula near γ Geminorum. Astron. zhur. 37
no.6:1122-1125 N-D '60. (MIRA 13:12)

1. Krymskaya astrofizicheskaya observatoriya Akademii nauk SSSR.
(Nebulae)

S/035/62/000/007/029/083
A001/A101

AUTHOR: Gershberg, R. Ye.

TITLE: Expansion of H II regions and origination of peripheral structures
in diffuse nebulae

PERIODICAL: Referativnyy zhurnal, Astronomiya i Geodeziya, no. 7, 1962, 35,
abstract 7A266 ("Izv. Krymsk. astrofiz. observ.", 1961, v. 25, 76 -
87; English summary)

TEXT: The author considers phenomena proceeding during expansion of an
ionized hydrogen zone surrounding a hot star. A shock wave is propagated over
the H I region, and in the H II zone density decreases. On account of density
decrease, the boundary between the ionized and non-ionized regions (ionization
front) moves away from the star. The problem is solved on assumption of iso-
thermicity for the case of uniform expansion of the H II zone. An investigation
of the condensed gas layer at the boundary of regions H I and H II has shown
that it can shine like peripheral structures (glowing arcs) observed in several
diffuse nebulae. The author holds that peripheral structures of the IC 1805,
IC 1848 nebulae are of just this nature.
[Abstracter's note: Complete translation]
Card 1/1

V. Gorbatskiy

S/035/62/000/007/025/083
A001/A101

AUTHORS: Gershberg, R. Ye.; Pronik, V. I.

TITLE: Absolute photometry of the emission nebula NGC 6618

PERIODICAL: Referativnyy zhurnal, Astronomiya i Geodeziya, no. 7, 1962, 31,
abstract 7A241 ("Izv. Krymsk. astrofiz. observ.", 1961, v. 26,
303 - 312; English summary)

TEXT: Information is given on observations of the nebula NGC 6618 in five different spectrum bands, by means of a high-speed camera ($F/1.4$, $D = 640$ mm) of the Crimean Astrophysical Observatory. Contours of corresponding pass bands are presented, as well as reproductions of nebula photographs and charts of brightness surfaces in absolute units for five different spectrum bands.

R. N. ✓

[Abstracter's note: Complete translation]

Card 1/1

S/035/62/000/007/030/083
A001/A101

AUTHOR: Gershberg, R. Ye.

TITLE: On temperature in the transition region of interstellar medium
between zones of H II and H I

PERIODICAL: Referativnyy zhurnal, Astronomiya i Geodeziya, no. 7, 1962, 35 - 36,
abstract 7A267 ("Izv. Krymsk. astrofiz. observ.", 1961, v. 26,
324 - 341)

TEXT: The author considers problems connected with determination of
electron temperature in the transition region of interstellar medium between
zones of H II and H I. He investigates the dependence of the average energy of
photo-electron, formed in the radiation field of a hot star during ionization
of interstellar hydrogen, on the optical thickness τ . One-dimensional problem
is solved rigorously. For the plane problem a rough approximation has been
found. It is shown that effect of scattered Lc-radiation sharply reduces the
increase with τ , and this effect very little depends on the temperature of
scattering medium within the range from 2,000 to 14,000°K. At $\tau \approx 1.5$ a con-

Card 1/2

S/035/62/000/007/030/083
A001/A101

On temperature in...

siderable part of photoionizations is produced by scattered Ly- α quanta, and at $\lambda \approx 10$ even the overwhelming part. All calculations are conducted for two models of early stars O7-O8 and B0-B1 V. Emission efficiency of various forbidden lines in cooling interstellar medium is estimated. It is shown that submillimeter radiation of neutral oxygen atoms is comparable in this respect with radiation of ions of carbon and silicon (in H I zones and in the H II - H I transition region). The author presents the results of determining electron temperature in the outer structural details, bright rims and "drapery", of the diffuse nebula NGC 6523. No marked difference was detected between temperatures of these formations and those of innermost parts of the nebula. There are 27 references.

Author's summary

[Abstracter's note: Complete translation]

Card 2/2

GERSHBERG, R. Ye. ..

Optical thickness of diffuse nebulae in H α lines. Astron.
zhur. 38 no.2:250-255 Mr-Apr '61. (MIRA 14:4)

1. Krymskaya astrofizicheskaya observatoriya AN SSSR.
(Nebulae--Spectra)

BOYARCHUK, A.A.; GERSHBERG, R.Ye.; GOLANDSKIY, O.P.; KOPYLOV, I.M.;
NIKONOV, V.B.

"Vistas in astronomy". Reviewed by A.A.Boiarchuk and others.
Astron.sbur. 38 no.4:777-782 J1-Ag '61. (MIRA 14:8)

1. Krymskaya astrofizicheskaya observatoriya AN SSSR.
(Astronomy)

GERSHBERG, R.Ye.

Expansion of H II regions and the formation of gravitationally
stable protostars. Astron.zhur. 38 no.5:819-827 3-0 '61.
(MIRA 14:9)

1. Krymskaya astrofizicheskaya observatoriya AN SSSR.
(Interstellar matter) (Stars)

GILSHKEIN, R.Ye.

Expansion of H II regions and the formation of peripheral
structures in diffuse nebulae. Izv.Krym.astrofiz.obser. 25:76-87
'61. (MIRA 14:10)

(Nebulae)

GERSHBERG, R.Ye.

Letter to the editor. Astron.zhur. 39 no.1:169 Jan-F '62.
(MIRA 15:2)

1. Krymskaya astrofizicheskaya observatoriya AN SSSR.
(Nebulae)

S/033/62/039/006/013/024
EO32/E314

AUTHOR: Gershberg, R.Ye.

TITLE: On the association between filamentary nebulae which
are remnants of the envelopes of type II supernovae and
H_α-emission stars

PERIODICAL: Astronomicheskiy zhurnal, v. 39, no. 6, 1962,
1033 - 1037

TEXT: The association was first discovered by R.V. Dolidze
(Astron. tsirk. no. 203, 8; no. 204, 13, 1959; Byull. Abastuman-
skoy astrofiz. observ., 25, 105, 111, 1960). There are three
possibilities as far as the interpretation of this association is
concerned, namely: 1) stars with different masses may be simu-
ltaneously formed in stellar clusters and whilst the heaviest of
them evolve rapidly through the hot-star stage and explode as
supernovae, the lighter stars have not as yet reached the main
sequence; 2) the effect may be associated with phenomena analogous
to the Earth's radiation belts - the upper layers of the field
stars may be disturbed by the supernova envelope travelling through
them, and 3) the phenomenon may be described in terms of the
Card 1/2

On the association

S/033/62/039/006/013/024
E032/E314

physical nature and evolution of compact details in the peculiar nebulae connected with the Cas A radiation source which might play the role of "protostars". The compact formations might in time evolve into H⁻-emission stars since S.B. Pikel'ner (Astron. zh., 38, 21, 1961)^α has interpreted them as accumulations of interstellar matter. It is shown that the latter interpretation is possible but further photometric and spectrophotometric data will be required to elucidate the physical conditions in nebular objects connected with Cas A. ✓

ASSOCIATION: Krymskaya astrofizicheskaya observatoriya Akademii nauk SSSR (Crimean Astrophysical Observatory of the Academy of Sciences, USSR)

SUBMITTED: November 21, 1961

Card 2/2

GERSHBERG, R.Ye.

Brief survey of investigations of morphological features of
diffuse nebulae. Vop.kosm. 8:180-190 '62. (MIRA 15:7)
(Nebulae)

5/712/62/028/000/005/020

E032/E114

AUTHORS: Artamonov, B.P., and Gershberg, R.Ye.

TITLE: A study of the brightness fluctuations in the diffuse nebula NGC 6618

SOURCE: Akademiya nauk SSSR. Krymskaya astrofizicheskaya observatoriya. Izvestiya. v.28. 1962. 156-158

TEXT: The function $G(r) = \Delta I^2(r) / I^2$ was computed for two regions of NGC 6618, where \bar{I} is the average surface brightness and $\Delta I(r)$ is the difference in brightness between two points separated by a distance r . The two regions are denoted by I and II in Fig.1, and the results obtained are given in Fig.2. The straight lines have slopes of 4/3 as given by S.B. Pikel'ner (Izv. Krymskoy astrofiz. obs., 11, 1954, 34). There are 2 figures.

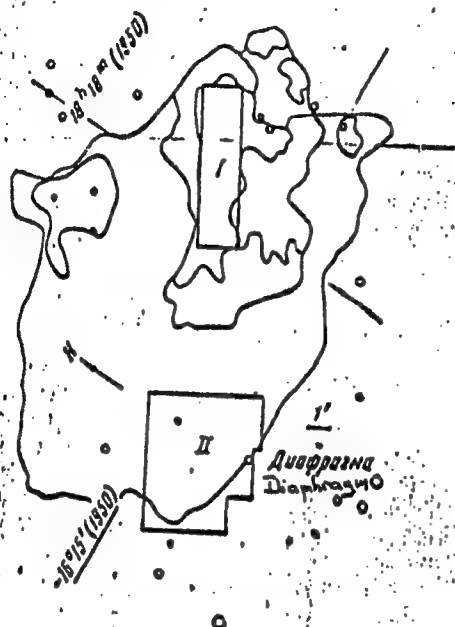
November, 1961

Card 1/3

A study of the brightness ...

S/712/62/028/000/005/020
E032/E114

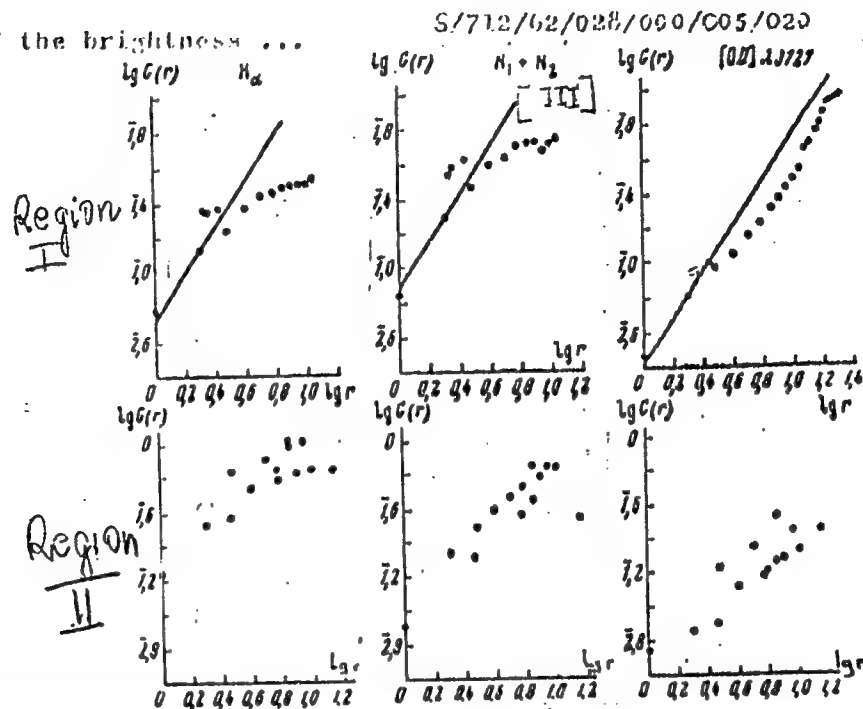
Fig.1



Card 2/3

A study of the brightness ...

Fig. 2



card 3/3

S/712/62/028/000/006/020
E032/E114

AUTHOR: Gershberg, R.Ye.

TITLE: Radio emission of planetary nebulae and a determination of the distance to these objects

SOURCE: Akademiya nauk SSSR. Krymskaya astrofizicheskiy observatoriya. Izvestiya. v.28. 1962. 159-165

TEXT: The distance determination is based on the following formula:

$$R = 1.85 \cdot 10^{40} \frac{F_{\lambda}}{\phi^3 n_e^2} \quad (8)$$

where: R is in pc, ϕ is the angular diameter in seconds, F_{λ} is the flux density in W/m² cps ($T_e = 15\,000\,^{\circ}\text{K}$), and n_e is the electron density. The method may be used for radio-transparent nebulae and is not sensitive to their optical thickness in the Lyman continuum. In the above formula the density may be deduced independently of distance (M.J. Seaton, D.E. Osterbrock, Astrophys.J., 125, 1957, 66). The table shows some of the

Card 1/3

Radio emission of planetary nebulae... S/712/62/028/000/006/020
E032/E114

results obtained R9 - present results; R10 - I.S. Shklovskiy's
results (Astron. zh., 33, 1956, 222, 315); R11 - corrected
values of Shklovskiy's results, using more accurate photometric
data (G.W. Collins II, C.T. Daub, C.R. O'Dell, Astrophys. J.,
133, 1961, 471).

There is 1 table.

December, 1961

Card 2/3

Radio emission of planetary nebulae... 5/712/62/028/000/006/020
E032/E114

Table

Object	n_e	Distance, pc			Mass, $10^{-3} M_{\odot}$
		R_9	R_{10}	R_{11}	
IC 418	$3.9 \cdot 10^4$	100	1300	580	0.10
NGC 6543	$6.0 \cdot 10^3$	620	770	520	13
NGC 6572	$8.3 \cdot 10^3$	$\begin{Bmatrix} 900 \\ 540 \end{Bmatrix}$	1200	$\begin{Bmatrix} 580 \\ 620 \end{Bmatrix}$	$\begin{Bmatrix} 24 \\ 5.3 \end{Bmatrix}$
NGC 6853	$3.7 \cdot 10^2$	34	150	87	0.77
NGC 7009	$6.0 \cdot 10^3$	240	550	390	2.4
NGC 7293	$1.6 \cdot 10^2$	17	50	50	0.54

Card 3/3

GERSHBERG, R.Ye.

Association of filamentary nebulae - remnants of envelopes
of type II supernovae with H_α emission stars. Astron.zhur.
39 no.6:1033-1037 N-D '62. (MIRA 15:11)

1. Krymskaya astrofizicheskaya observatoriya AN SSSR.
(Nebulae)

GERSHBERG, R. E. [Gershberg, R. Ye.], kand. na fiziko-matem. nauki
KOVACHEV, Bogomil, kand. na fiz.-mat. nauki [translator]

Studies on the interstellar substance, conducted by the
Crimean Astronomical Observatory. Priroda Bulg 12 no. 5:
108-113 S-O '63.

BOYARCHUK, A.A.; GERSHEBERG, R.Ye.; PRONIK, V.I.

Formulae, graphs, and nomograms for a quantitative analysis
of the spectra of emission objects. Izv. Krym. astrofiz. obser.
29:291-314 '63. (MIRA 16:10)

ACCESSION NR: AR4039237

S/0269/64/000/004/0024/0024

SOURCE: Ref. zh. Astronomiya, Abs. 4.51.187

AUTHOR: Belyakina, T. S.; Boyarchuk, A. A.; Gershberg, R. Ye.

TITLE: Energy distribution in the continuous spectrum of novalike and symbiotic stars

CITED SOURCE: Izv. Kry'msk. astrofiz. observ., v. 30, 1963, 25-41

TOPIC TAGS: star, symbiotic star, novalike star, astronomy, astrophysics, stellar spectrophotometry, slitless spectrograph, emission line, nebula, planetary nebula

TRANSLATION: This article presents the first results of stellar spectrophotometric studies made using the 2.6-m reflector of the Crimean Astrophysical Observatory. There is a brief description of the slitless spectrograph used in the observations and a detailed discussion of the method used for investigation of the energy distribution in the stellar continuous

Card 1/3

ACCESSION NR: AR4039237

spectrum. On the basis of 30 spectrograms the authors obtained the energy distribution in the spectrum of the novalike star AG Dra and in the spectra of three symbiotic stars (Z And, AG Peg and BF Cyg). For each of these stars the authors determined the energy distribution in the spectral region $\lambda \lambda$ 3300-5000 and have given a physical interpretation of the observed distribution. The spectrum of AG Dra corresponds to the integrated spectrum of a star with a spectrophotometric temperature of 2800°K and ionized hydrogen at $T_e = 20000^\circ\text{K}$; the spectrum of Z And is interpreted as the joint radiation of a star with $T = 36000^\circ\text{K}$ and hydrogen plasma at an electron temperature of 30000°K. The spectra of AG Peg and BF Cyg in the studied region of the spectrum are caused by the luminescence of ionized hydrogen at electron temperatures of 30000 and 80000°K respectively. An estimate is made of the optical thicknesses of all gas components of the studied objects; in the H δ line they are several units. Estimates are given of the equivalent widths of the brightest emission lines and the determined energy distribution in the continuous spectrum has been used to compute the energy relationships between the emission lines. A preliminary quantitative analysis of the emission lines made for BF Cyg confirms the results obtained from the continuous spectrum. Investigation of the planetary

Card 2/3

ACCESSION NR: AR4039237

nebula IC 4997 served as additional control of the correctness of the method as a whole. Bibliography of 17 items. Author's abstract.

DATE ACQ: 12May64

SUB CODE: AS

ENCL: 00

Card 3/3

ACCESSION NR: AR4042151

S/0269/64/000/006/0077/0077

SOURCE: Ref. zh. Astronomiya. Otdel'ny'y vy'pusk, Abs. 6.51.566

AUTHOR: Gershberg, R. Ye.

TITLE: Investigation of emission nebula NGC 6618. Outburst of supernovae, and diffuse nebulae

CITED SOURCE: Izv. Kry'msk. astrofiz. observ., v. 30, 1963, 90-103

TOPIC TAGS: supernova, emission nebula, nebula, interstellar absorption, diffuse nebula

TRANSLATION: Arguments are given in favor of the assumption of the relatively recent outbursts of Type II supernovae in nebula NGC 6618. First, according to observation data, spectrum of glow of this object should be of thermal nature. However, the 5 stars (brighter than $12^m.5$) of classes O-B known in this region cannot ensure sufficient ionization of this powerful gaseous complex. Therefore it is necessary to assume the presence of unregistered O-B stars with a brightness

Card 1/3

ACCESSION NR: AR4042151

weaker than $12^m.5$. Re-evaluation of the distances to O-B stars known in a given region of the sky, based on the presence of systematic divergences of the MK spectral classification and that given by I. I. Pronik (Journal of Abstracts, Astronomy, 1961, 4A407; 1962, 1A265), and also determination of the distance to NGC 6618 by radioastronomy data, taking into account not only circular but also radial motions of the gaseous component of the Galaxy, lead to coinciding values of ~ 300 ps. The presence, in the region of the radio-center of the nebula, of interstellar absorption $\geq 11^m$, explains the absence, in the catalogs, of O-B stars ($12^m.5$), since the absolute value of the latter is only $\sim 7^m$. Second, near NGC 6618 there are known 3 stars of classes O-B with tangential velocity components of the order of 220 ± 190 , 310 ± 160 , and 390 ± 160 km/sec; the region of "emanation" of these is inside the nebula. Their kinematic ages are within the limits $(1.4 - 2.2) \cdot 10^4$ years. Third, photographs in H δ , made with long exposure, show that emission nebulae IC 4706, IC 4707, and S 193, encompassing the bright central part of NGC 6618 from the west, are closed with a luminescent semiellipse, encompassing this object from the east. All this leads to the conclusion con-

Card 2/3

ACCESSION NR: AR4042151

cerning the close similarity of the complex NGC 6618 with the corresponding known complex in the Orion nebula and gives an idea of their formation as a result of some catastrophic phenomenon, similar to or even identical with outbursts of Type II supernovae. If, however, we assume identity of the mechanisms of the formation of envelopes of NGC 6618 and the Barnard loop (envelope of the complex in Orion), then it is possible to estimate the age of the former. This age is equal to $\sim 10^5$ years. Considering the coarseness of the determination of the age of the envelope of NGC 6618 and the kinematic ages of its "scattering" stars, these magnitudes can be considered as agreeing fully satisfactorily. Furthermore, it is possible to estimate the electron concentration in the envelope of NGC 6618, which is $n_e \sim 80 \text{ cm}^{-3}$. The conclusion is drawn that apparently, as a result of outbursts of supernovae inside diffuse nebulae, in the latter there should appear extended weakly luminescent emission fields with the possible formation, in the central parts, of large emission complexes of dark absorbing interstellar matter and that outbursts of supernovae can support random motions of matter inside diffuse nebulae. Bibliography: 38 references.

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3/3

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S. W. Parker's "Stellar Wind" theory. Vop. 7, no. 10 (1964-18) '64.
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